

ABSTRACT OF  
THE DISCLOSURE

Methods, apparatus, and articles of manufacture for retaining packet order in multiprocessor systems utilizing multiple transmit queues are disclosed herein.

Embodiments of the present invention define multiple transmit queues for a given priority level of packets to enable the multiprocessor system to process and queue packets of equal priority in different transmit queues. Queuing packets of equal priority in different transmit queues minimizes processor time spent attempting to acquire queue-specific resources associated with one particular transmit queue. In addition, embodiments of the present invention provide an assignment mechanism to ensure that packets corresponding to a common flow are queued in the same transmit queue in order to eliminate, to the extent possible, out-of-order packets, which many times results in lost packets and a reduction in realized network throughput.